

**26V DC / 230V AC ADAPTER****9890 000 02461****FILING INSTRUCTIONS**

File this documentation in binder:

UNIT manual MEDIO 30 CP-H  
UNIT manual MEDIO 50/65 CP-H  
UNIT manual SUPER CP  
SUBSYSTEM manual OPTIMUS 50/65/80



# PHILIPS

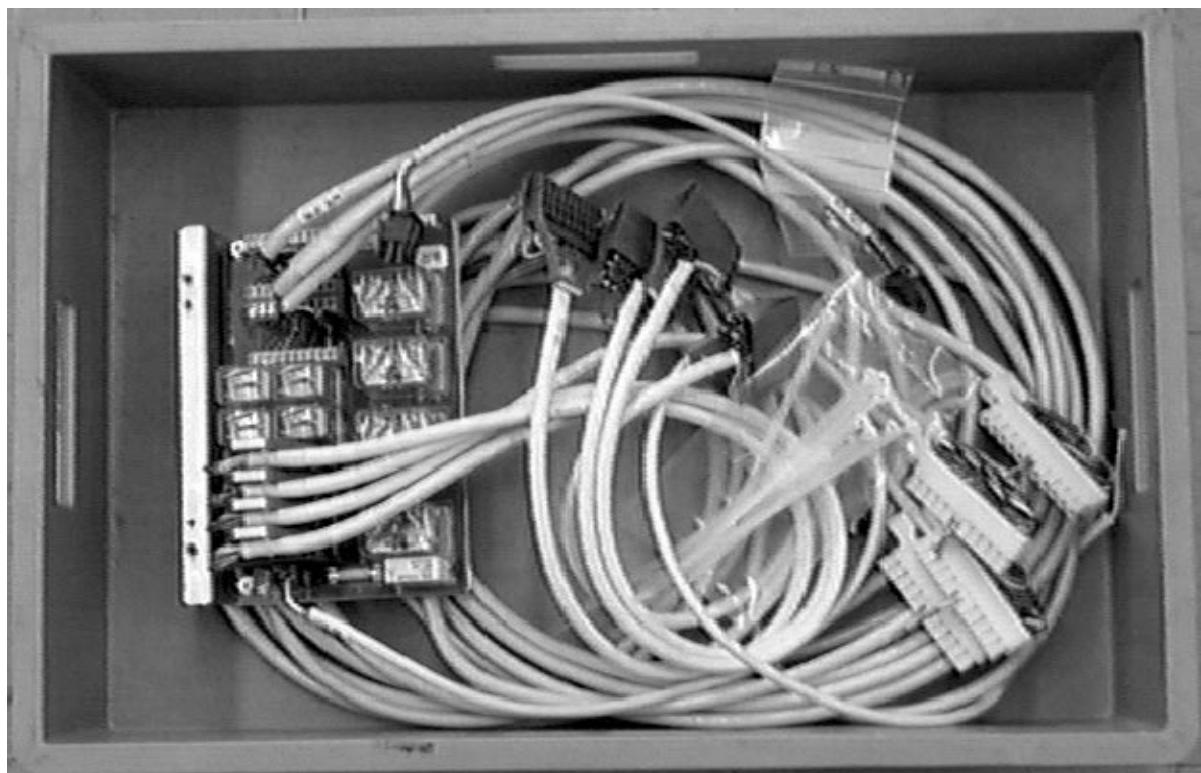
## Philips Medical Systems Development and Manufacturing Centre

SERVICE MANUAL  
742  
UNIT

### 26V DC / 230V AC ADAPTER

**9890 000 02461**

4512 103 75811



182H95

for connecting up to the generator release decade connectors.

Conversion of the voltages of 26 V DC release decade connectors on the generator  
to 230 V AC on the diagnostic unit.

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Manual Order No. 4512 984 00891

Adapter 26V-/230V~

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(96.0)

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**SERVICE MANUAL - UNIT****26V DC / 230V AC ADAPTER**

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In case there are any questions concerning this manual,  
please send this LOPAD via fax to 49/(0)40/5078 2481

File: ADAP\_26V/230V\_960E

**List of pages and drawings (LOPAD)****Manual Order No: 4512 984 00891**

0.5 ( /96.0) 223 mm (Rosa Karton)

1 ( /96.0)

2 ( /96.0)

3...8 ( /95.0) E

P-List 9890 000 02461

Z3-1 ( /96.0) A2/A3

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## Drawings

26 V DC/230 V AC adapter

Z3-1

**1. Application/General**

This adapter is necessary for adapting the voltage of the release decade connectors of generators using 26 V DC to diagnostic units which require 230 V AC for their release decade connectors. Normally every auxiliary using a release voltage of 230 V AC requires an adapter decade circuits.

For each of the 4 decade connectors the adapter converts the following functions:

Function	PIN	Signal	Mnemonic		
			SCP	Medio CPH	OPTIMUS
Synchronous feedback from the system and exposure request to the generator: System      --->      Generator	1	<u>20</u>	RQXGEX	RQXGEX	RQ_XG_EX
Request to synchronize exposure to the subsystem and Exposure Ready signal from the generator to the system: Generator      --->      System	2	<u>21</u>	XGRDEX	XGRDEX	XG_RD_EX
Request to the generator for Exposure Preparation from the system or handswitch: System      --->      Generator Exposure switch      --->      Generator	3	<u>32</u>	RQXGPR	RQXGPR	RQ_XG_PR
Fixed supply voltage/Reference potential	4		0VXG	0VLV	PO_26V_RE
Switched supply voltage from the generator to the release switches via auxiliary unit relays: Generator      --->      System Generator      --->      Exposure switch	5	<u>30</u>	RGDV	RGDV	GD_DV
Request to the generator for Fluoro from: Fluoroswitch      --->      Generator System Fl. switch      --->      Generator	6	<u>33</u>	RQXGFL	RQXGFL	RQ_XG_FL
Fixed supply voltage/Reference potential	7		-24VXG	-24VLV	GND
Request to the generator for Exposure Ready from the system or handswitch: System      --->      Generator Exposure switch      --->      Generator Generator response after test for 21 = XGRDEX	10	<u>31</u>	RQXGRD	RQXGRD	CM_EX

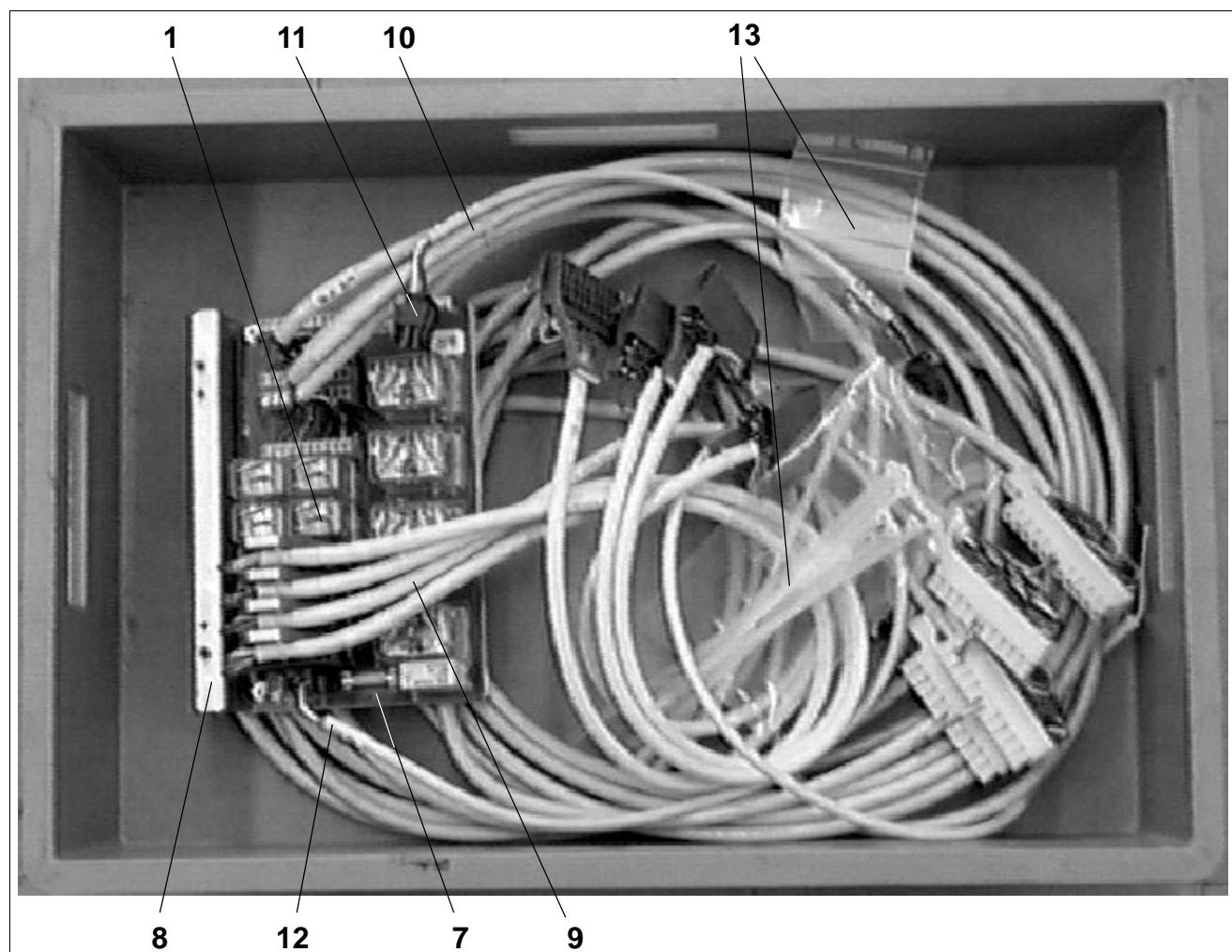
## 2. Compatibility

The 26 V DC/230 V AC adapter is compatible with the following generators:

- OPTIMUS
- SUPER CP
- MEDIO CP-H

## 3. Scope of delivery

- 26 V DC/230 V AC PCB adapter	mounted on a base plate GPL (7) with bracket (8).
- 4 decade cables, 0.85 m long	with 2 decade female connectors (9) for connecting to the generator release decade connectors.
- 4 decade cables, 3.5 m long	with 1 decade connector (10) for connecting to the wall junction box.
- 1 cable, 0.35 m long	for 230 V AC supply in the OPTIMUS (11)
- 1 cable, 2.20 m long	for 230 V AC supply in the SCP/Medio CP H (12)
- Miscellaneous (13)	Screws + cable ties + ...



## 4. Tools required

Standard service tools are required.

## 5. Specifications

### Ordering numbers:

26 V DC/230 V AC PCB adapter : 4512 108 0868.

26 V DC/230 V AC base plate adapter : 4512 104 3683.

Set of cables for 26 V DC/230 V AC adapter : 4512 104 3707.

Fuse for 230 V AC circuit : 5 A

### Additional delays:

- for exposure : approx. 15 ... 35 ms

- for preparation and fluoroscopy : approx. 5 ... 12 ms

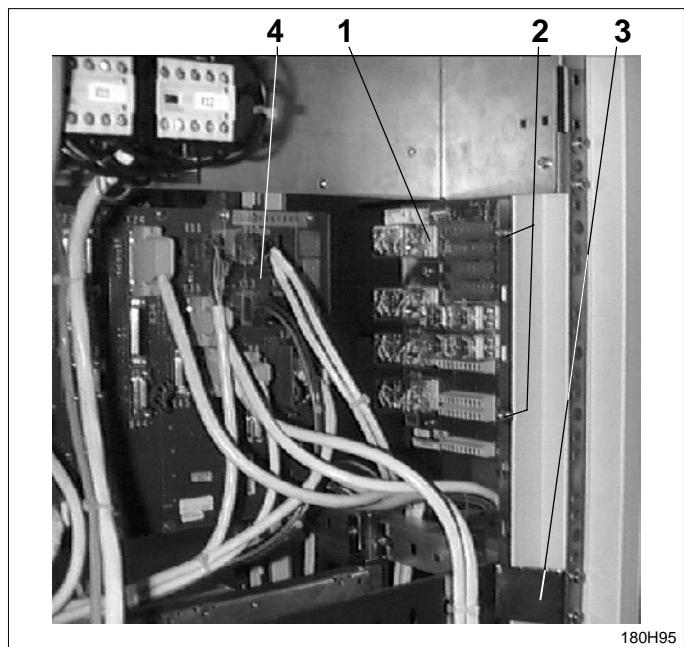
## 6. Installation

The adapter (1) is screwed on to the generator cabinet perforated vertical (3) with 2 screws (2).

The positions intended for installation are:

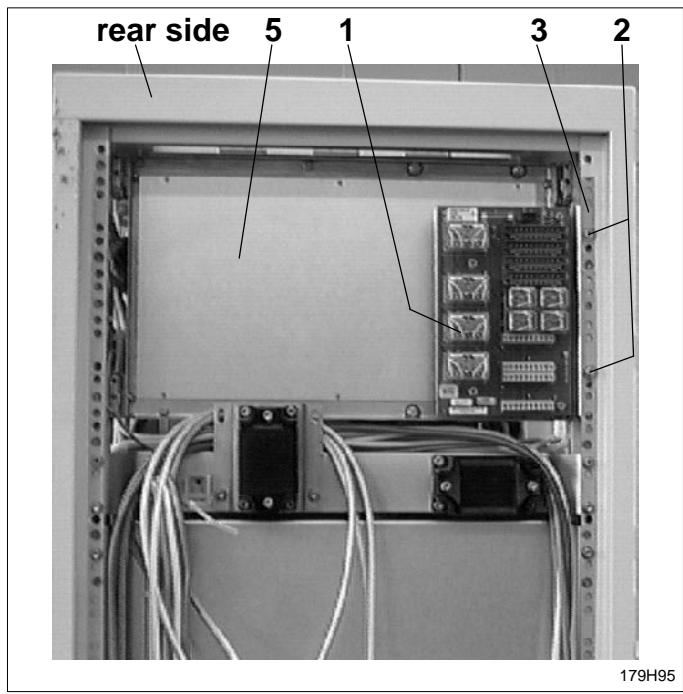
### OPTIMUS:

Rear, top right, on the cabinet perforated vertical of the left-hand side wall, behind back panel EZ (4).



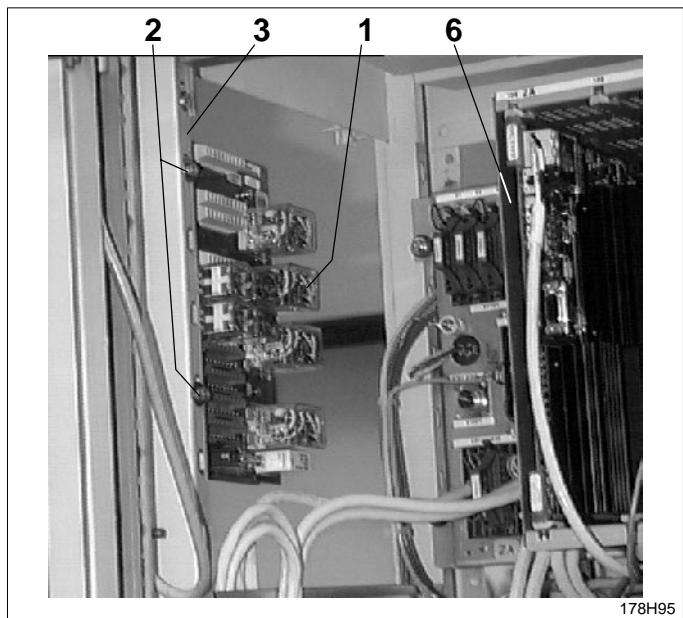
SCP:

Rear, top right, on the right-hand cabinet perforated vertical of the back panel, behind option rack EW or EWA (5).



### Medio CP H:

Side wall front, left cabinet perforated vertical, top, left in front of generator control ZA (6).



## 7. Electrical connections

The following must be connected up to the adapter:

- The required released decade connectors for the 230 V AC diagnostic units and
- the 230 V AC supply voltage for the adapter.

Assignment of the input and output decade connectors in the adapter is as follows:

Input connector on the adapter		Output terminal on the adapter
Generator end:		Diagnostic unit end:
EWR X1	<----->	EWR X11
EWR X2	<----->	EWR X12
EWR X3	<----->	EWR X13
EWR X4	<----->	EWR X14

The following connections of the release decade connectors are possible, depending on the type of generator:

Output decade connectors on the generator	Short decade cable	Input decade connectors on the adapter EWR	Output decade connectors on the adapter EWR	Long decade cable	Wall junction box
OPTIMUS :					
EWA X1 - 4	→				
EWB X1 - 4	→				
E2WA X1 - 4	→				
SCP :					
EZ X1 - 4	→	EWR X1 - 4	EWR X11 - 14	→	ME
E X21 - 24	→				
Medio CP H :					
EZA X1 - 5	→				

230 V AC supply to the adapter depending on the type of generator (2-wire cable):

230 V AC generator end:	Adapter end:	Cable:
OPTIMUS:		
EZ X15	EWR X21	0.35 m 2 connectors
SCP:		
EN X 1401	---- EWR X21:1	2.20 m
EN X 1402	---- X21:2 (zero)	1 connector
Medio CP H:		
EN X 1121	---- EWR X21:1	2.20 m
EN X 1114	---- X21:2 (zero)	1 connector

## 8. Setting-to-work

There is no need for any commissioning, balancing or adjusting procedures.

Owing to the additional delay times of the adapter for the camera and film changer mode the dead times may have to be readjusted.

## 9. Special circuit for the Bucky/Tomo diagnostic unit BT-S2

For the radiography mode the BT-S2 requires an additional signal, RQXGPR = 32, which the adapter cannot deliver to the BT-S2.

Relay K3 on the adapter is used to generate this signal. The following modifications must be performed on the adapter:

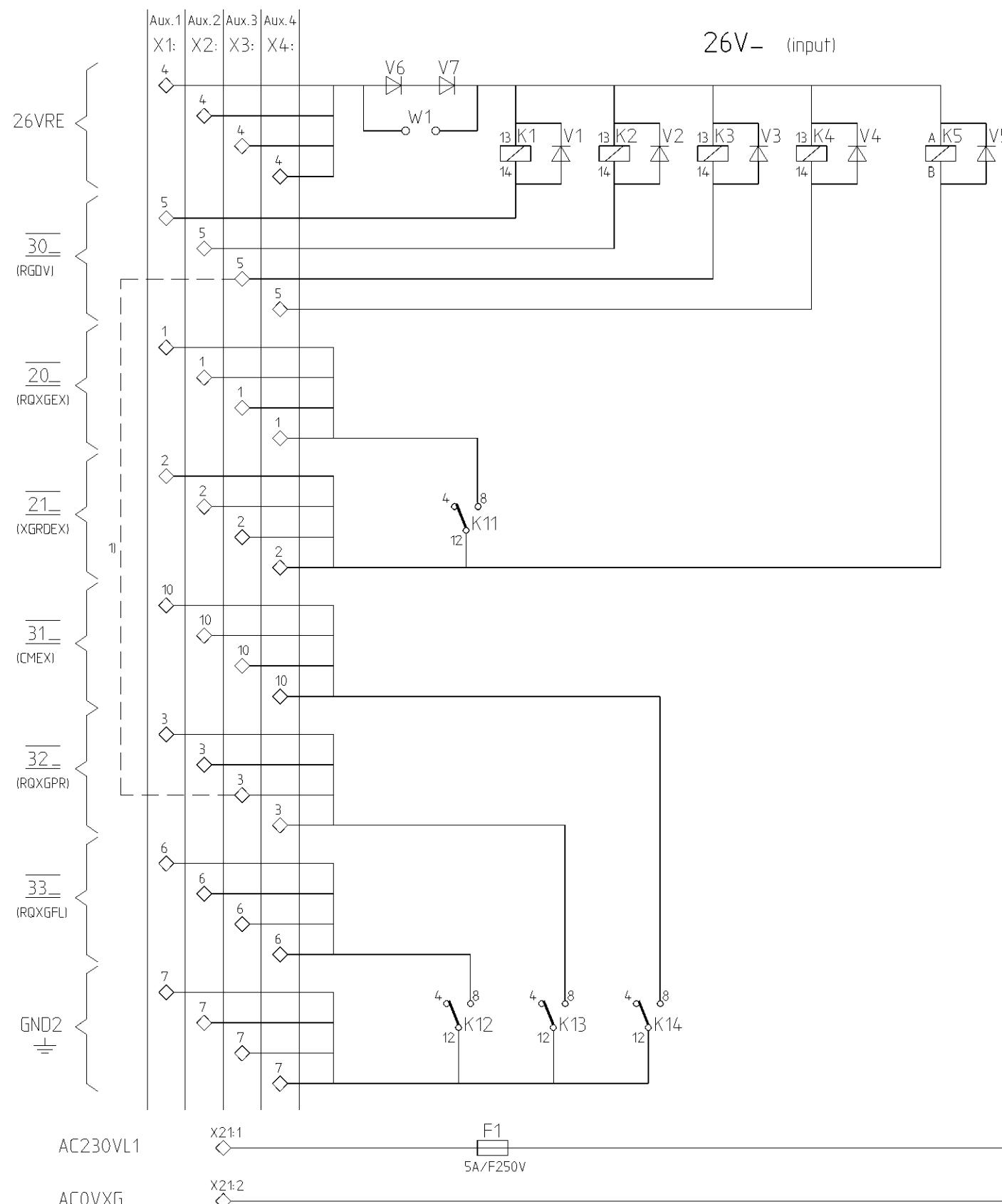
- Short the input decade X3 terminals 3 and 5: X3:3 ---- X3:5.  
This causes K3 to pick up upon any preparation at the generator handswitch.
- Break connection K13: ----/-/-/-/----K1:10.  
K13 must not pick up or else it will hold via link X3:3 ---- X:5.
- Link the output decade connectors of the auxiliary upon which the grid is to act, e.g.:  
Bucky to decade circuit 1: X11:5 ---- X11:3  
Tomo to decade circuit 2: X12:5 ---- X12:3.

When auxiliary 1 (decade X1) or 2 (decade X2) is selected, signal 32 (220 V AC) passes through contacts X11:5 (X12:5) ----> X11:3 (X12:3) ----> K3:10 ----> X13:3 -----> BT-S2: connector RY 107 and actuates relay RA S13.

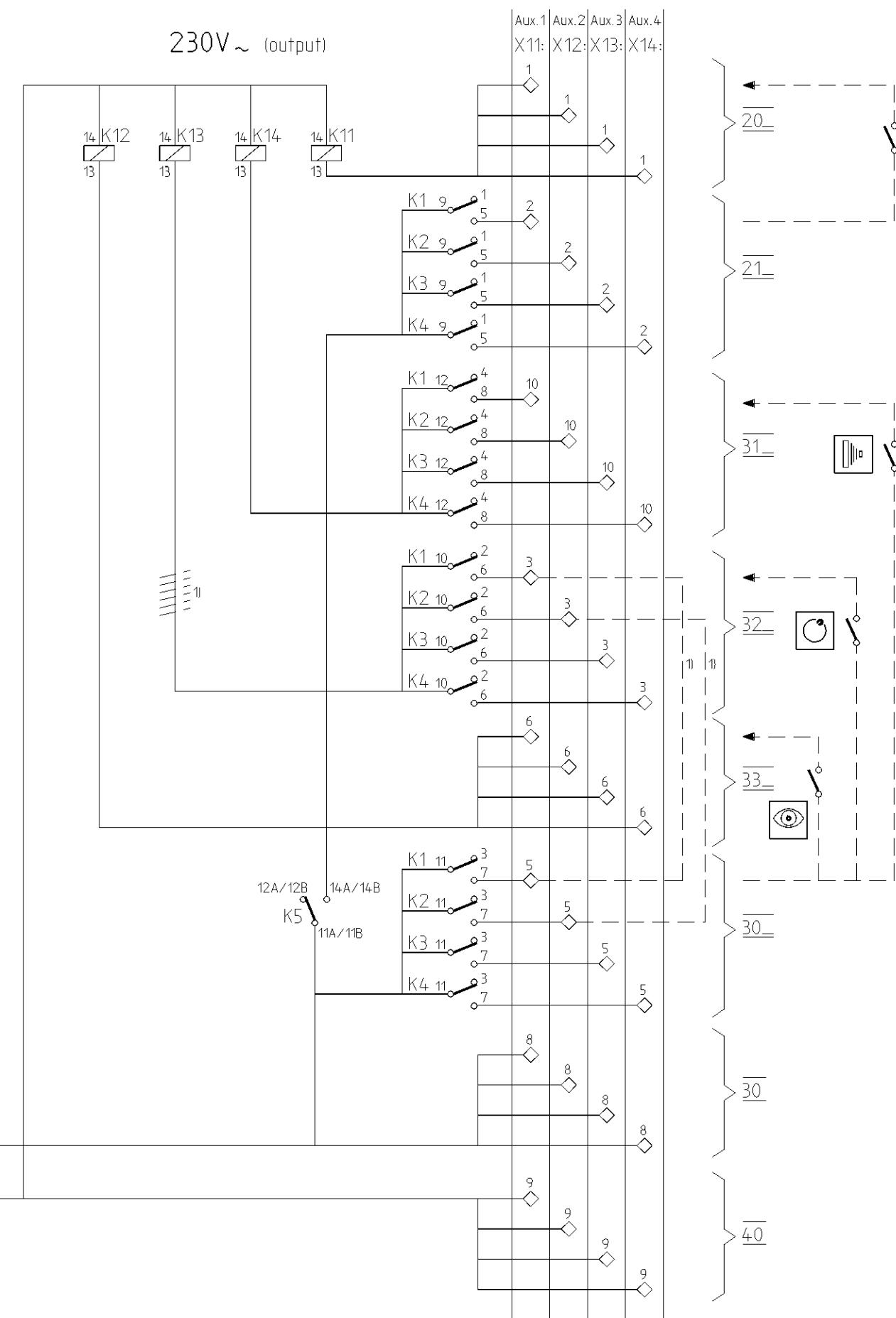
This relay switches the required working voltage on to drive the grid of the BT S2.

This single connection must be made in addition to the normal decade connection. Make sure the BT-S2 only has one "decade connector input".

If it has to be possible to switch between the Bucky and the Tomo auxiliary from the generator desk, Extension Kit WO, 9804 713 00002, is required in addition.



## 1) changes for BTS2



WR  
Adapter 26V-/ 230V~  
4512 108 08681